**MINUTES**
**of the**
**SECOND MEETING**
**of the**
**WATER AND NATURAL RESOURCES COMMITTEE**

**July 18-19, 2006**
**Santa Fe**

The second meeting of the Water and Natural Resources Committee was called to order by Representative Joe M Stell, Chair, on Tuesday, July 18, 2006, at 10:10 a.m. in Room 307 of the State Capitol in Santa Fe.

**Present**
Rep. Joe M Stell, Chair
Sen. Carlos R. Cisneros, Vice Chair
Sen. Sue Wilson Beffort
Rep. Ray Begaye
Sen. Dede Feldman (July 18)
Sen. Mary Jane M. Garcia
Rep. Dona G. Irwin
Rep. Kathy McCoy
Sen. Cynthia Nava
Sen. Stephen P. Neville
Rep. Andy Nunez
Sen. Mary Kay Papen
Sen. H. Diane Snyder (July 19)
Rep. Mimi Stewart
Rep. Don L. Tripp (July 18)

**Absent**
Rep. Joseph Cervantes
Rep. Larry A. Larranaga
Rep. Sandra L. Townsend

**Advisory Members**
Sen. Vernon D. Asbill
Rep. Anna M. Crook
Rep. Candy Spence Ezzell
Sen. Clinton D. Harden, Jr.
Sen. Gay G. Kernan
Rep. Rhonda S. King
Rep. Ben Lujan
Rep. Danice Picraux
Sen. Leonard Lee Rawson (July 18)
Sen. Nancy Rodriguez
Sen. John C. Ryan (July 18)
Rep. Peter Wirth

Sen. Rod Adair
Rep. Richard P. Cheney
Sen. Timothy Z. Jennings
Rep. James Roger Madalena
Rep. Terry T. Marquardt
Rep. Henry Kiki Saavedra
Sen. Leonard Tsosie
Rep. Eric A. Youngberg

(Attendance dates are noted for those members not present for the entire meeting.)

**Staff**
Gordon Meeks
Jon Boller
Mark Bolton
Jeret Fleetwood

**Guests**
The guest list is in the original meeting file.

**Tuesday, July 18**

The committee members began by introducing themselves and the staff.

**Water Conservation**

John Longworth of the Office of the State Engineer (OSE) provided the committee with an overview of the urban water conservation programs administered by the OSE. He explained that the programs basically fall into two categories: those for water suppliers and those for the distribution of educational materials for residential consumers. Mr. Longworth noted that the conservation programs for water suppliers include programs to develop protocols, such as a standard means of performing water system audits and standardizing the gallons per capita per day calculation. He also pointed out that several publications, such as water conservation guides for public utilities and commercial, industrial and institutional water users, are available through the OSE.

Next, Mr. Longworth discussed the water conservation education materials for residential water consumers available through the OSE. He provided the committee with a list of these materials and pointed out that the water conservation publications produced by the OSE are free to residential customers. Mr. Longworth also discussed new residential conservation projects that the OSE is working on, such as a rooftop water harvesting manual and a residential irrigation calculator.

Finally, Mr. Longworth discussed water conservation educational materials available to K-12 students. He provided the committee with a list of classroom materials available from the OSE and outlined the Project WET outreach effort and some of the partnerships the OSE has formed through the project.

Questions and comments focused on:
- a method for notifying school districts about materials available from the OSE;
- the electronic availability of OSE's educational materials;
- the involvement of Native American students in Project WET;
- conservation efforts regarding water cooling equipment such as ice machines;
- water loss tracking data for municipalities;
- annual reports of municipal water losses;

- grey water systems as water conservation; and
- marketing of OSE products and publications.

Mark Sanchez and John Stomp of the Albuquerque Bernalillo County Water Authority provided the committee with an overview of the water authority's conservation goals and strategies. Mr. Sanchez explained that as Albuquerque's population grows and demand for limited water resources increases over the next 50 years, water conservation will play an increasingly important role as the water authority attempts to lessen its dependence on aquifer pumping. To illustrate, he provided the committee with charts indicating the projected increase in demand for water resources and the success that the community has had to date in conserving water. He noted that since 1995, per capita water use has been reduced from 250 gallons per day to 175 gallons per capita per day.

Mr. Sanchez went on to discuss other water conservation strategies, including leak detection strategies. He explained that a pilot project that used noise sensors to detect leaks in 250 miles of underground water pipelines found 52 leaks that could account for 200 million gallons of lost water per year. Mr. Sanchez also pointed out that the effort to retrofit homes with low-flow toilets saved the water authority 13,870,000 gallons of water in its first year.

Mr. Stomp provided the committee with an overview of the drought management strategies that the water authority is employing. He began by explaining that water levels in the aquifer underneath Albuquerque have dropped dramatically due to ground water pumping. Mr. Stomp went on to discuss the components of the water conservation program, such as low-flow toilet rebate programs, xeriscape rebate programs and use of a water waste ordinance. He also discussed drought management strategies, such as the four progressive stages of drought severity: advisory, watch, warning and emergency. Mr. Stomp explained that at the March 15, 2006 Albuquerque Bernalillo Water Authority Board meeting, a drought watch was declared, which would remain in effect until it is repealed by the authority or by November 1, 2006. He also discussed some of the measures that go into effect during a drought watch, such as a mandatory program of watering no more than three times per week using even/odd-numbered addresses, doubling water waste fees and increased water waste enforcement.

Questions and comments focused on:
- potential population growth accommodated by Albuquerque's current water rights at the consumption goal of 150 gallons per capita per day;
- the amount of San Juan Chama water available for Albuquerque;
- water harvesting rebates;
- waste water treatment and recycling;
- the definition of well wash;
- the effect of rainwater harvesting on aquifer recharge;
- the contract term of New Mexico's entitlement to San Juan Chama water;
- extending the 40-year water planning horizon to 70 years;
- a comparison of urban residential per capita use with rural residential per capita use;
- Intel's water use;

- Albuquerque's efforts to recharge the aquifer;
- the source of water losses and fines;
- the division of the San Juan-Chama project rights between the contractors;
- the water debt of the Middle Rio Grande Conservancy District to the city of Albuquerque;
- surcharges on excessive water users to foster conservation;
- disposition of revenues to the water department;
- water hydrants as leading sources of water system leakage;
- the fact that seven percent of the water diverted for use in the city is unaccounted for;
- statewide water conservation standards for commercial buildings;
- rebates and other water conservation incentives for developers;
- meter inaccuracies;
- the extraterritorial zone's subdivision water use and approval; and
- double dipping of sold water rights by Middle Rio Grande Conservancy District water rights holders.

Dr. Phil King of New Mexico State University (NMSU) provided the committee with an overview of some of the research he has conducted regarding irrigation water conservation. He began by discussing his background in water research for the committee, noting that he is an agricultural engineer at NMSU and that he has done some consulting work for the Elephant Butte Irrigation District (EBID) and the El Paso Irrigation District.

Dr. King explained that the OSE issued an order for the lower Rio Grande regarding metering of agricultural water in 2004. He noted that the turmoil that was expected as a result of the order never really materialized, pointing out that members of EBID had already been metering their water use. Dr. King emphasized that metering is important when considering water conservation, since it is impossible to conserve water without some knowledge of how much is available and how much is being used.

Dr. King went on to discuss the importance of clearly defining what water conservation actually is. He explained that defining conservation should begin with some definition of water use. To illustrate the difficulty in defining water use, Dr. King pointed out that while it is relatively easy to measure applied water, it is extremely difficult to measure depleted water.

Next, Dr. King discussed some of the potential unintended consequences of water conservation. He explained that much of the middle Rio Grande riparian ecosystem sustains itself from water seepage from nearby irrigation ditches and that lining those ditches to conserve water by reducing seepage could have some negative effect on the nearby riparian system. Dr. King also noted that rainwater harvesting may actually be robbing the aquifer of some of the water that it needs to recharge itself. He emphasized that it is impossible, in most systems, to separate ground water from surface water, and that depleting one resource will likely affect the other.

He said that the state needs a depletion-based water accounting system rather than a use-

based system because the definition of "use" is confused with actual application of water. Use generally is considered to be synonymous with diversions, but there are significant depletions prior to any real "use". The full amount of water that is diverted for any use never arrives at the point of use because of depletions (evaporation, leakage, seepage, etc.). He said that people need to be careful about the assumptions of what actually constitutes conservation, that some conservation methodologies may have the unintended consequence of depleting the overall available water. He enumerated four cautions: recognize contradictions in terminology; define conservation objectives more clearly; define constraints and secondary impacts; and recognize that surface and ground water cannot be separated — that they are interconnected.

Questions and comments focused on:

- the use of drip irrigation systems and their effect on aquifer recharge;
- net depletions caused by conservation technology;
- the percentage of return flow of diversion and the ratio of diversion to delivery;
- how depletion-based accounting might affect legislation;
- the efficiency of flood irrigation;
- consumptive use of water vs. depletive uses and the effect of interbasin water transfers on both;
- the need to "balance" depletions;
- the differences between different crops' duty of water;
- the amount of a water right the state engineer allows to be transferred from irrigation use to municipal use; and
- the impact of consumptive water use on water systems.

**Regional and Community Water Systems**

Frank Coppler of Coppler & Mannick, PC, provided the committee with testimony regarding the various powers and duties of private water corporations; public improvement districts; mutual domestic water consumer associations; water and sanitation districts; and city or county water utilities. For example, he pointed out which entities may issue bonds and which may not. Mr. Coppler went on to note that currently, there exist no simple means in statute for one entity to change itself into another kind as the population it serves grows. He also noted that many private water corporations are interested in changing themselves into mutual domestic water consumers for the purpose of being able to receive state funds.

Questions and comments focused on:

- the pros and cons of regulation of various entities;
- water and sanitation district use of eminent domain; and
- annexation procedures and jurisdictional issues of these organizations.

**Water Augmentation Technologies**

Dean Gabriel and Roderick Mays of Brac Systems provided the committee with a demonstration of a product marketed by their company that, once installed in a home, captures shower and washing machine water, cleanses it and reuses it to flush toilets. They explained that an average family of four uses 63,408 gallons of water per year and that roughly half of that amount is used for bathing and washing clothes. Mr. Gabriel and Mr. Mays claimed that their product could help residential water consumers save 30 to 40 percent on their annual water bill. They provided the committee with a schematic showing how their product is able to work in a typical house and explained some of the modifications that are available that would make the product more compatible in New Mexico, where homes typically do not feature basements.

Questions and comments focused on:

- the unit cost of $1,575;
- whether statistics cited by Brac systems apply to typical New Mexican families;
- different-sized units for larger houses; and
- how water use has increased six-fold in New Mexico communities where the population has only increased by 100 percent.

The minutes of the June 16, 2006 meeting were adopted as submitted.

**Enhancing Water Availability**

Sigmund Sibler provided the committee with a list of technologies that might be employed to increase the quality and availability of water in New Mexico. He briefly discussed each of the technologies, such as mining deep and shallow brackish water; plains and mountain cloud seeding; aquifer storage and recovery, and large-scale surface water capture. Mr. Sibler went on to explain the costs involved with each of the technologies, the cost-benefit ratio of several of the technologies and regions of the state where particular technologies would likely be most effective. Mr. Sibler went on to discuss the obstacles to deployment of the various technologies. He summarized his presentation by noting that summer plains cloud seeding and large scale surface water capture were the two technologies that, if the obstacles to their deployment can be addressed, would likely benefit water users in New Mexico the most.

Questions and comments focused on:

- involvement of local governments in implementing water enhancement technologies;
- the council of governments as potential fiscal agents;
- supercooling temperatures required for rain to form and the effect on rainfall patterns due to global warming;
- ski resorts' use of cloud seeding;
- effectiveness of cloud seeding projects in southern New Mexico; and
- the potential of cloud seeding to cause hail and hail damage.

Staff noted that the presentation given by Frank Coppler raised questions that staff will likely be asking legislators during the session when they request bills to form regional water authorities. They pointed out that the old entity typically has to be dissolved in order to form a

new one.

Representative Stell provided the committee with an update on a lawsuit involving water users in the Mimbres Basin that alleges that the statute allowing the OSE to issue permits for domestic wells is actually unconstitutional because it further divides a resource that is already fully allocated.

**Wednesday, July 19**

**Briefing on Implementation of the Gila Settlement**

Craig Roepke, Deputy Director and Statewide Projects Bureau Chief of the Interstate Stream Commission (ISC), provided the committee with an update on the 2004 Arizona Water Settlements Act, which provides New Mexico with 14,000 acre-feet of water and between $66 million and $128 million. He explained that two components of the settlement, the Gila River Indian Community Water Rights section and the Consumptive Use and Forebearance Agreement, are of particular interest to New Mexico. Mr. Roepke noted that the Gila River Indian Community Water Rights section provides New Mexico with the $66-128 million, while the Consumptive Use and Forebearance Agreement allocates the 14,000 acre-feet of water to New Mexico.

Danielle Smith, also of the ISC, provided the committee with an update on the planning process regarding the funding available to New Mexico. She explained that beginning in 2012, annual deposits totaling $66 million will be paid to the New Mexico Unit Fund, which is administered by the ISC. Ms. Smith went on to note that any expenditure from that fund must be approved by the ISC in consultation with the Southwest New Mexico Water Planning Group, which represents local governments, and must meet a water supply demand. She went on to explain that if New Mexico chooses to develop the additional 14,000 acre-feet of water made available through the settlement, additional funds up to a total of $128 million are provided for. However, Ms. Smith cautioned that any development of additional water would have to, according to ISC policy, apply the best available science to fully assess and mitigate the ecological impacts on the area.

She indicated that, pursuant to terms of the settlement, it will be difficult for New Mexico to be able to use its additional 14,000 acre-feet, because respect for the "valuable ecology of the Gila" is mandated and additional water may only be diverted at flood stage of the river.

Coleman Smith, also of the ISC, provided the committee with testimony regarding the structure and goals of the Gila-San Francisco Coordinating Committee. She explained that representatives of the ISC, the Bureau of Reclamation, the U.S. Fish and Wildlife Service, the Office of the Governor and the Southwest New Mexico Water Planning Group form the Gila-San Francisco Coordinating Committee. Ms. Smith went on to explain that a number of subcommittees, many of them with scientific backgrounds, have been formed by the coordinating committee to advise the coordinating committee. She indicated that by 2009, the coordinating committee intends to produce a Coordination Act Report, which will be used to

select options for development of water resources in southwestern New Mexico.

Mr. Roepke summarized the presentation, emphasizing that the people of New Mexico, through the various planning entities, will have to decide by 2009 if and how they wish to develop the 14,000 acre-feet of water. The federal government requires notification by 2014 of what New Mexico wants to do with its additional 14,000 acre-feet and the money available for its use. The year 2009 is a tentative deadline for local interests to come to an agreement because the lead time for completing environmental impact statements and compliance with other regulations is about five years.

Sandia National Laboratory is providing scientific support for the studies at its expense. The presenters emphasized that the citizens of the region will make the decision. The total cost of the study and planning effort is estimated to be $1,390,000, with some of that work being completed by the U.S. Fish and Wildlife Service.

Questions and comments focused on:

- economic development opportunities afforded by additional water and funding for development in southwest New Mexico;
- the negotiating process that netted New Mexico additional water and funding;
- Federal Endangered Species Act regulations that must be met before development can occur;
- the role of federal agencies in the process;
- whether the money for the settlement has already been appropriated by Congress;
- duplication of effort among subcommittees of the Gila-San Francisco Coordinating Committee;
- whether Arizona groups (who do not want New Mexico to use its share of the water because they want it) are trying to influence decisions on the Gila-San Francisco Coordinating Committee;
- the involvement of Phelps-Dodge Mining Corporation in the Gila-San Francisco Coordinating Committee;
- the Colorado River Compact history and parameters of the Central Arizona Project, of which the Gila is a component;
- Arizona environmental activists' participation in New Mexico's planning process for the Gila;
- the list of members of the southwest New Mexico water planning group;
- the annual flow of the Gila and its ability to meet endangered species requirements; and
- the national environmental movement's desire to preserve the last undammed river in the west.

The committee discussed an invitation to meet in Silver City and Deming next year, since the last time it met there was the 2004 interim.

**Salt Basin Water Study Status Report**

Craig Roepke provided the committee with an update on a study being conducted to

determine whether there are sufficient water resources in an aquifer lying underneath the Salt Basin to begin pumping water from it for uses in other areas of New Mexico. He explained that the ISC had recently received data from Sandia Labs that indicated that safe yields of 15,000-55,000 acre-feet of water could likely be pumped out of the aquifer. Mr. Roepke emphasized that the aquifer covers a large geographic area with complex geology.

Questions and comments focused on:

- the order of applications for pumping rights in the aquifer received by the ISC;
- the location of the Salt Basin;
- coordination among the experts for various components of a study to determine the capacity and develop the resource;
- the money received by Sandia Labs for conducting studies on the aquifer was in the form of tax credits;
- El Paso's and the Texas Salt Basin aquifer projects;
- adjudication of water rights in the Salt Basin;
- availability of water for nearby New Mexico communities;
- the prohibitive cost of infrastructure for moving water to other communities;
- the possibility of public/private partnerships to develop necessary infrastructure; and
- when the basin was "declared" a closed basin.

**Land, Wildlife and Clean Energy Legislation**

J.D. Bullington, a lobbyist for the World Wildlife Fund, provided the committee with testimony regarding the Land, Wildlife and Clean Energy Act (Senate Bill 407 and House Bill 188 from the 2006 session). He explained that a bill was introduced during the 2006 legislative session that allowed for conservation projects to be conducted on lands to be acquired from willing sellers. Mr. Bullington went on to indicate that a revenue stream for such land acquisitions could come from distributions from the oil and gas conservation tax, which would go into a new bonding fund and that money from the bonding fund could be leveraged against available federal money.

Odes Armijo-Caster of the Reusable Energy Industries Association of New Mexico also discussed the Land, Wildlife and Clean Energy Act. He explained that in past years, the legislature has appropriated funds for clean energy grants to help reduce energy costs for schools and governments. Mr. Armijo-Caster provided the committee with a list of some of the projects that had been conducted and noted that funding for grants this year was included in the 2006 Land, Wildlife and Clean Energy Act, which failed to pass. He noted that providing a dedicated funding stream for the Land, Wildlife and Clean Energy Act would allow the grants that help reduce energy costs for schools and governments to continue.

Caren Cowan, executive director of the New Mexico Cattle Growers' Association, told the committee that her organization supports the bill because agriculture is the third largest economic driver in the state, and the bill will help protect agriculture.

Questions and comments focused on:

- involvement of soil and water conservation districts in the Land, Wildlife and Clean Energy Act;

- the amount of distribution from the oil and gas conservation tax;
- the potential to attract matching federal money;
- the definition of conservation projects that would be eligible;
- the potential reduction of local tax bases by acquisition of land for public ownership;
- the history of the oil and gas conservation tax;
- the effort to reach out to different constituencies to reach consensus on the Land, Wildlife and Clean Energy Act;
- whether a funding stream is necessary to issue bonds;
- authorization by the legislature of projects under the Land, Wildlife and Clean Energy Act;
- opposition to use of the oil and gas conservation fund for this purpose;
- the average age of farmers and ranchers;
- the fact that the funding stream was a primary problem last year;
- the bonding authority assigned to the New Mexico Finance Authority and the bill skirting the existing New Mexico Finance Authority Act;
- management of land acquired under the act;
- the board's criteria for acquisition of land under the act and the degree of legislative oversight;
- the fact that representation on the board is not representative; and
- the potential to take land out of production or water out of beneficial use and duplication of other similar programs and laws.

Reese Fullerton representing the secretary of energy, minerals and natural resources told the committee that the bill is a priority of the governor, but that the administration is not wedded to a specific funding mechanism and that concerns expressed by the committee today will be addressed.

More comments and concerns expressed by the committee included:

- the potential for artificially bidding up the price of water rights by the Land, Wildlife and Clean Energy Act and increasing agricultural operating costs;
- the appearance of the act being a "sideways" method of controlling growth;
- the potential use of the money pursuant to the bill for conservation easements instead of fee simple title; and
- the lack of involvement of soil and water conservation districts in the negotiations for the bill.

There being no further business, the committee adjourned at 12:40 p.m.